



NONAQUEOUS ELECTROLYTE SOLUTION AND LITHIUM SECONDARY BATTERY USING SAME

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Applicant: UBE INDUSTRIES

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Abstract of JP2003059529

PROBLEM TO BE SOLVED: To provide a lithium secondary battery with excellent battery cycle characteristics, and battery characteristics such as capacitance and charge preservation characteristics which can restrain swelling of a battery when used at high-temperature. **SOLUTION:** Electrolyte salt is lithium salt containing fluorine atom, and nonaqueous solvent contains cyclic carbonate and/or cyclic ester and at least one kind of alkyne derivatives such as divinyl sulfone or methanesulfonate-2- propynyl, and tertiary carboxylate as expressed in formula (V) is contained in the nonaqueous solvent by 0.1 to 10 weight percent. In the formula, RA, RB, RC denote each independently a methyl group, an ethyl group, a propyl group, and a butyl group, and RD denotes a hydrocarbon group with the carbon number of 1 to 20.

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